

Business and Information Technology Strategy Alignment: At a Public Sector Organisation in Southern Africa

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Abstract – Business and IT strategy alignment has been a key issue in the effectiveness of any business operations. Based on a survey from a sample selected from a public sector entity in South Africa, this study found that achieving alignment between business and IT strategy within the organisation is important and they were in agreement that such alignment supports various functions in the organisation. The study identified the key people, process and organisation factors that assist business IT alignment in the organisation.

Keywords – Business IT Strategy, Alignment, South Africa, Public Sector.

I. INTRODUCTION

The concept of aligning business and information technology (IT) strategy has been recognised as an important issue that contributes to the effectiveness of business operations. Multiple studies [14,16,26] have indicated that poor or non-existent business and IT alignment (business-IT alignment) has contributed to a decrease in organisational performance. Previous studies have identified a number of factors that promote alignment between business and IT strategies. The purpose of this study is to establish the alignment of business and IT strategy and identify the factors that will enhance the alignment of business and IT strategy at a public sector entity in South Africa.

II. LITERATURE REVIEW

The alignment of business strategy with information technology or information systems strategy has been ranked as one of the most important issues faced by business executives [2]. Business-IT alignment concerns the degree of correspondence of an organisation's IT strategy and IT infrastructure with the organisation's strategic business objectives and infrastructure [3]. Business-IT alignment refers to applying IT in an appropriate and timely way, in harmony with business strategies, goals and needs and when discussing business-IT alignment, terms like harmony, linkage, fit, match, and integration are frequently used synonymously with the term alignment [19]. Information Technology plays a critical role in supporting the various processes of the Electoral Commission and in the successful delivery of the national, provincial and municipal elections in South Africa.

Achieving alignment between business and information technology strategies has long been a crucial issue for many organisations [27]. There is a belief that failing to perceive the value of IT investment is due to lack of business-IT alignment [4]. Some reasons for this failure that were identified are related to the role of manager. These include the inability to maintain internal and external business-IT communication, failure in practicing the changes, lack of support from senior managers and resistance to change in organisations [21]. Achieving the alignment has been found to lead to sustainable competitive advantage [29], higher business performance [11,29], superior realised value of IT investment [4,11] and enhanced information systems strategic planning [11].

Studies also support the notion that alignment improves the performance by allowing organisations to use Information System (IS) strategically [10]. As IT is considered a key issue, much research has been carried out on the strategic alignment [30], however, one of the main points of criticism on the existing research is that it is too theoretical and fails to capture real life. Continuous change and intense competition has led organisations to either adapt to new conditions or fail in their business [22].

III. PURPOSE OF RESEARCH

This study seeks to establish whether there is alignment of business and information technology strategy in the selected public sector organisation and identify factors that will enhance alignment of business and IT strategy and following objectives were proposed.

IV. OBJECTIVES OF STUDY

The objectives of the study are:

1. To establish the alignment of business and IT strategy in the selected organisation.
2. To identify factors that enhances the alignment of business and IT strategy in the said organisation.

V. RESEARCH DESIGN

A questionnaire by Gartlan & Shanks [12] was used as data collection method. They used factors as a way of defining how organisations can achieve successful alignment between business and IT strategy. This questionnaire comprises of four sections. The first section of the questionnaire asks for background information

including geographical segmentation or operations and client base and overall perceptions of business and IT strategy. The second and third sections concerns the aspects of business and IT strategy respectively. The fourth section asks respondents to use the 5 point likert scale to indicate their perceptions of both the importance and success in their organisation of factors that promote alignment between business and IT strategy.

A sample size of 100 participants was chosen from a total population of 150 employees in the organisation. Non-probability sampling technique was used to select participants from top, middle and junior managerial positions. Only 20 responses were received.

VI. DATA ANALYSIS

Questions 1-6 of the survey sought to get information on the the revenue and the importance of IT in the organisation's operation. Secondly, this section determined what the role of respondents was in business and IT strategy development within their organisation. Thirdly, the section got the perceptions of respondents on alignment between business and IT strategy by asking a number of questions about what they perceive the outcome of alignment was.

The importance of IT and extent of involvement in the formation of business strategy and IT in the organisation

All 20 respondents agreed that IT was important or very important to their organisation. The response rate shows that technology is increasingly playing a very important role in the success of organisation. The impact that technology has on various domains such as business, education, health etc. has been enormous

The extent of involvement in the formation of business strategy in the organisation.

74% of respondents were involved or very involved with business strategy formulation within the organisation. 15% of respondents indicated that they were uninvolved or very uninvolved in the business strategy formulation whilst 1% remained neutral.

The responses indicated that business and IT functions have a two way relationship to allow the achievement of alignment during the strategy formulation.

The extent of involved in information technology strategy within the organisation

48% of respondents indicated that they were involved or very involved in the IT strategy formulation within their organisation. 26% were neutral and 26% indicated they were uninvolved or very uninvolved. Though the percentage of involvement in IT strategy formulation involvement is 48%, it is not convincing.

Organisation's total expenditure spent on IT per annum

From the percentages of total expenditure that is spent on IT per annum, some interesting patterns emerged. 21% of respondents indicated that the organisation spend in excess of 50% on IT per annum as compared to 11% who indicated an IT expenditure of between 31-40% per

annum. 42% of respondents indicated IT expenditure of between 21-30% per annum whilst 16% indicated the between 11-20% of expenditure was spend on IT per annum. 5% of indicated that the organisation spend between 0-10% on IT per annum. The remaining 5% did not did not provide any information. These results suggest that respondents had no clear idea of IT spending by the organisation.

Importance of alignment between business and information technology strategy within the organisation.

All respondents agreed that achieving alignment between business and IT strategy within the organisation is important or very important. The respondents were aware that IT creates value for their organisation through creativity and implementation of sound infrastructural services. This assists in exploitation of business opportunities, which includes the use of business innovation through dynamic re-configuration and quick response to business environment issue. The alignment of business and IT enhances coordination, customer satisfaction and product development.

The role of alignment between business and information technology strategy to achieve various objectives in organisation.

The mean scores of the respondents for various objectives due to alignment are reported in table 1.

Table 1: Scores of respondents on various objectives

Item	Av. Score
Improved relationship between business and IT decision makers	3.00
Improved communication between business and IT decision makers	3.06
Improved perception of the IT function within the organisation.	3.11
Improved use of IT within the organisation	3.00
Improved utilisation of IT resources to achieve organisational goals	3.12
Improved revenue	2.93
Reduction of IT costs	2.50
Reduction of overall costs	2.94
Better IT returns on investment	3.06
Better overall returns on investment	3.11
Perceived improved use of IT innovation by the market place.	3.00
Positive effect on organisational brand.	3.11
Increased competitive advantage in the market place.	3.00

The above results suggest that respondents were in agreement that alignment of business and IT strategy helps or supports various functions or objectives in the organisation.

Perception of alignment of the business and information technology strategy

84% agree that business and IT strategy within their organisation is well aligned whilst 11% percent indicated that they were not aligned. Rest had no idea.

Factors That Promote Alignment

The factors were grouped into three clusters – people, process and organisation. Questions were asked in two angles. Firstly, how important they were perceived to be in achieving alignment between business and IT strategy, and secondly how successful were their organisation with each of these factors. The responses were then converted to a Likert scale and ranked to determine the most important and most successful respectively.

People factors

Respondents were asked to rate the importance of the people factors as reported in table. Table 2 shows the ranking in order of importance that the respondents feel are appropriate to their organisation.

Table 2: Ranking of importance of people factors

Item	Av. Score
Management skills & capability of IT decision makers	3.63
Communication between business and IT decision makers	3.63
Involvement of IT decision makers in business strategy formulation	3.63
Management skills & capability of business decision makers	3.58
Meeting of the minds between business and IT decision makers	3.53
Firm wide involvement in business and IT strategy formulation	3.37
Involvement of business decision makers in IT strategy formulation	3.37

On the Likert scale all seven people factors had a score of between 3 and 4, indicating that these people factors are important in achieving alignment. Of the seven, the top three were: management skills & capability of IT decision makers, Communication between business and IT decision makers and Involvement of IT decision makers in business strategy formulation.

Process factors

The questionnaire asked respondents to rate the importance of various process factors as listed in table below.

Table 3: Rankings of importance of process factors

Item	Av. Score
A formal process that ensures business strategy has a long term (5 years +) focus	3.61
A formal process that ensures IT strategy has a long term (5 years +) focus	3.56
A process that ensures IT strategy goals are linked with business goals	3.50
Formal communication process in place between business and IT decision makers	3.33
A process that promotes clarity & consistency	3.28
A process that ensures business goals are linked to IT strategy goals	3.22
The availability of a formal process which facilitates alignment	3.06

On the Likert scale all seven factors has a score of between 3 and 4 clearly indicating that these process factors are important in achieving alignment. Of the seven process factors, the top three were: a formal process that ensures business strategy has a long term (5 years +) focus; a formal process that ensures IT strategy has a long term (5 years +) focus and a process that ensures IT strategy goals are linked with business goals.

Organisational factors

The questionnaire asked respondents to rate the importance of the organisational factors as reported in table below.

Table 4 identifies which organisational factors are important in achieving alignment between business and IT strategy. They are ranked in table 4 to show the most important.

Table 4: Ranking of importance of organisational factors

Item	Av. Score
a. An organisational structure which facilitates alignment between business and IT decision makers	3.44
b. An organisational culture which facilitates alignment between business and IT decision makers	3.39
c. The view that IT is an organisational tool as opposed to a cost centre	3.33

With respect to importance, all 3 organisational factors had an average Likert scale rating score between 3 and 4, clearly indicating that these organisational factors are important in achieving alignment. The organisational factors ranked as follow: An organisational structure which facilitates alignment between business and IT decision makers; an organisational culture which facilitates alignment between business and IT decision makers and the view that IT is an organisational tool as opposed to a cost centre.

With respect to success, two of the three organisational factors had an average Likert scale rating of between 3 and 4, indicating that they were successful with one indicating unsuccessful. From the success perspective, the ranking of the three organisational factors are as follows: the view that IT is an organisational tool as opposed to a cost centre; an organisational culture which facilitates alignment between business and IT decision makers and an organisational structure which facilitates alignment between business and IT decision makers.

VII. DISCUSSION

This study found low (48%) involvement of respondents in the business IT strategy formation and this involvement need to increase. According to studies like [5,18,20] an organisation has to have a structure that provides mechanism for accountability and ownership of strategy formulation for successful alignment. Having such a mechanism in place does not only ensure that IT and business strategy will be formulated but also hold

individuals accountable when alignment is not achieved and business goals remain unfulfilled [27,12].

The results suggest that respondents had no clear idea of IT expenditure by their organisation. Organisations have realised that the role of IT not only can be used in daily activities but also in long term strategic planning and decisions [1] and hence many organisations are spending more and more on Information technology management systems [8]. This indicates that the importance of IT to business is increasing and organisations need to consider this aspect seriously.

All respondents agreed that achieving alignment between business and IT strategy within the organisation is important or very important; most of the respondents perceived the alignment between business and IT strategy well aligned; and were in agreement that alignment of business and IT strategy helps or supports various functions or objectives in the organisation. These findings are in line with other studies like Henderson & Venkatraman; Carr; [18,8] etc.

Of the seven people factors, management skills & capability of IT decision makers; communication between business and IT decision makers; and Involvement of IT decision makers in business strategy formulation were the top three factors. Based on the literature, respondents agree with previous studies [5,9,15, 19,24] on the notion that management skill and capability needs to be well developed in both business and IT managers to facilitate alignment. Purposeful and strategically focused communication is important for successful alignment). Communication facilitates understanding [5,9,15] and promotes mutually beneficial thinking about strategy [23,24]. The chief information officer (CIO) should be actively involved in all strategy formulation within the organisation [17,24,25]. The responses indicate that there is an agreement that the CIO plays a crucial role in ensuring the organisation's IT function is deployed to achieve strategic advantage.

The top three most successful process factors were found in this study were: a formal process that ensures business strategy has a long term (5 years +) focus; a formal process that ensures that IT strategy has a long term (5 years +) focus and a process that ensures that IT goals are linked with business goals. Both IT and business strategies should hold a long-term focus on critical issues for successful alignment [5,16]. The response of participant really indicate their understanding on the fact that lack of long term focus from both business and IT strategies will definitely impede alignment.

These findings on organizational factors are consistent with the previous studies which found that creating an organisational structure that facilitates alignment is important as it provides a "mechanism for accountability and ownership" if alignment goals remain unfulfilled [5,8] found that the IT function needs to be viewed as an organisational tool in order to promote alignment and when it is not viewed this way it is usually due to deeply instilled perceptions which hamper "the extent to which new IT opportunities emerge and are addressed by the organisation".

VIII. CONCLUSION

The results of the study suggest that alignment of business and IT strategy in public sector organisations is receiving attention. Employees in such institutions are aware of alignment issues and are able to identify the key issues pertaining to the strategic alignment. Most of the alignment issues studied in this study were found to be in alignment with previous studies; however the issue on spending on IT needs to be further emphasized by public sector organisations.

IX. LIMITATIONS OF THE STUDY

Although the questionnaire used in this study was validated by previous studies, the small number of respondents limits the findings of this study. Further the results of this study cannot be generalized to all the public sectors from a single study.

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